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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/711,547	11/13/2000	Peter Fischer	DT-3645	8041

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EXAMINER

KAO, CHIH CHENG G

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 07/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/711,547

Applicant(s)

FISCHER, PETER

Examiner

Chih-Cheng Glen Kao

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 7-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 7-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 08 April 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3, 4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US Patent 4,470,873) in view of Yoshikawa (JP 11-273520), Bruch (US Patent 4,831,484), and BEI Motion Systems Company (Optical Encoder Design Guide).
2. Regarding claims 1, 3, 8, and 9, Nakamura shows a scanning device comprising: a magnetoresistive probe, an electronic module, and conductor strips (Title, Figs. 24-26, and col. 1, lines 1-15). However, Nakamura does not seem to specifically disclose housing, a fuse of lower melting point that interrupts current at a specific temperature, and a sectional constriction.

Bruch teaches the fuse of lower melting point that interrupts current at a specific temperature (Fig. 1, #8). BEI Motion Systems Company teaches housing (Figures on Page 5, 8, and 9). Yoshikawa teaches the sectional constriction (Title, Abstract, and Figs. 1-4, 6, and 7).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the housing of BEI Motion Systems Company, fuse of Bruch, and sectional constriction of Yoshikawa with the device of Nakamura, which is explained with motivation as follows.

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One would be motivated to have the fuse as part of a safety barrier in explosive atmospheres as shown by Nakamura (col. 1, lines 1-15).

One would be motivated to have housing for protection in explosive or toxic environments as shown by BEI Motion Systems Company (Page 11).

It would have been obvious to have the sectional constriction of Yoshikawa, since the fuse of Yoshikawa and the fuse of Bruch are considered functionally equivalent in that they both melt when it reaches a certain temperature. One would be motivated to use the fuse of Yoshikawa to create a current and thermal fuse function in one electronic element to reduce components as implied from Yoshikawa (Abstract).

3. Regarding claim 4, Nakamura in view of Yoshikawa, Bruch, and BEI Motion Systems Company suggests a device as recited above. However, Nakamura does not seem to specifically disclose a fuse between the probe and electronic module.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have a fuse between the probe and electronic module with the suggested device of Nakamura in view of Yoshikawa, Bruch, and BEI Motion Systems Company, since it would have just involved routine skill in the art to rearrange fuses in an electrical circuit. Thermal fuses are considered conventional in the art and can be placed anywhere for protection of components. One would be motivated to place a fuse between the electronic module and probe to create a safety barrier between the two.

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4. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Yoshikawa, Bruch, and BEI Motion Systems Company as applied to claim 1 above, and further in view of Ernst (US Patent 4,369,578).

5. Regarding claim 5, Nakamura in view of Yoshikawa, Bruch, and BEI Motion Systems Company suggest a device as recited above. However, Nakamura does not seem to specifically disclose electrical connections extending outside the housing.

Ernst teaches housing (Fig. 2, #10).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have electrical connections extending outside the housing with the suggested device of Nakamura in view of Yoshikawa, Bruch, and BEI Motion Systems Company, which is explained with motivation as follows. BEI Motion Systems Company shows one type of housing (Figures on Page 5, 8, and 9). Ernst shows another type of housing (Fig. 2, #10). Housing is considered conventional in the art for protection components. It would have only involved routine skill in the art to rearrange to housing to protect certain components. One would be motivated to have housing with connections extending outside in order to have housing for extra protection around the fuse and electronic module.

6. Regarding claim 7, Nakamura in view of Yoshikawa, Bruch, and BEI Motion Systems Company suggest a device as recited above. However, Nakamura does not seem to specifically disclose aluminum housing.

Ernst teaches aluminum housing (col. 2, lines 1-6).

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It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the aluminum housing of Ernst with the suggested device of Nakamura in view of Yoshikawa, Bruch, and BEI Motion Systems Company since one would be motivated to use it for protection against mechanical damage as shown by Ernst (col. 2, lines 1-6). Secondly, it would have been within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Response to Arguments

7. The drawing objections in the action mailed January 30, 2002, have been withdrawn.
8. Applicant's arguments filed April 8, 2002, have been fully considered but they are not persuasive.

Regarding housing, the claim does not specifically recite the housing "only" shielding the electronic module.

Regarding Bruch, Bruch does disclose a fuse (col. 3, lines 46-47).

Regarding Yoshikawa, fuses are conventional. Substituting the fuse of Yoshikawa to replace another would have involved routine skill in the art. Integrating a fuse would also have only involved routine skill in the art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (703) 605-5298. The examiner can normally be reached on M - Th (8 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



gk
June 28, 2002



ROBERT H. KIM
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